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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/617,086	07/14/2000	Masahiro Tsujishita	649-753P	5579
2292 7590 12/28/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER LAO, LUN S	
			ART UNIT 2615	PAPER NUMBER
			NOTIFICATION DATE 12/28/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

09/617,086

Applicant(s)

TSUJISHITA ET AL.

Examiner

Lun-See Lao

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7 and 12-21 is/are allowed.
- 6) ☒ Claim(s) 8-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Introduction

1. This is in response to the amendment filed on 12-12-2007. Claim 8 has been amended and claim 6 has been cancelled. Claims 1-5 and 7-21 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai (US PAT. 4,727,580) in view of Tsuji (JP 11-186924).

Consider claim 8, Sakai teaches that a noise removal apparatus comprising:

a first demodulator (see fig.1 (26)) configured to produce a demodulation signal, the demodulation signal having information corresponding to audio signals of a plurality of channels, each of the audio signals corresponding to a respective one of the plurality of channels (see col. 3line 35-col. 4 line 50);

an audio signal demodulator (18) configured to receive and demodulate the demodulation signal produced by the first demodulator (26) in order to obtain the audio signals corresponding to each of the plurality of channels (R, L) from the demodulation signal, the audio signal demodulator further being configured to output the audio signals (see fig.6 and col. 6 line 10-68);

Art Unit: 2615

a noise detector (17) configured to receive the demodulation signal communicated between the first demodulator (26) and the audio signal demodulator (18), the noise detector (17) further being configured to detect noise in the received demodulation signal (see col. 2 line 10-68); and

a corrector (19) independently configured to correct the detected noise in each audio signal, which is outputted from said audio signal demodulator, according to the output of said noise detector (see fig.4 and col. 4 line 50-col. 5 line 60); but Sakai does not explicitly teach at least one corrector configured to: receive the audio signals respectively corresponding to the plurality of channels outputted from the audio signal demodulator, and independently correct the detected noise in each of the audio signals, outputted from said audio signal demodulator according to the output of said noise detector.

However, Tsuji teaches at least one corrector configured to (see fig. 18 (28)): receive the audio signals respectively corresponding to the plurality of channels(Rch, Lch) outputted from the audio signal demodulator(5), and independently correct the detected noise in each of the audio signals, outputted from said audio signal demodulator according to the output of said noise detector (26)(see figs. 18, 20 and see detail disruption page 7 [0038]-[0041] and figs 8-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Sakai in to the teaching of Tsuji to provide an apparatus for the separation and demodulation of such signal would benefit from the ability to adjust to this temporal variation to reduce the noise.

Art Unit: 2615

Consider claim 9 Tsuji et al. teaches that the noise removal apparatus of said noise detector (see fig.10, 20) conducts the noise detection such that, for each predetermined period which alternates among a plurality of channels, a portion of the period respectively overlaps with each other (see detail disruption page 5 [0024]-[0030] and figs 8-12 and see the discussion above claim 8).

Consider claims 10-11 Sakai teaches that the noise removal apparatus of the output of said noise detector (see fig.1 (17)), a generation condition of the noise is detected, and corresponding to the detected result, the detection sensitivity of said noise detector (17) is controlled (see fig.4 and col. 4 line 50-col. 5 line 60); and an audio output apparatus including said noise removal apparatus (see fig.4 and col. 4 line 50-col. 5 line 60).

Allowable Subject Matter

4. Claims 1-5, 7, and 12-21 allowed.

Response to Arguments

5. Applicant's arguments with respect to claims 1-5 and 6-21 have been considered but are moot in view of the new ground(s) of rejection and see the final rejection above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2615

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any response to this action should be mailed to:

Mail Stop ____ (explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:
(571) 273-8300

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner


Art Unit: 2615

should be directed to Lao,Lun-See whose telephone number is (571) 272-7501 The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao,Lun-See *L.S.*
Patent Examiner
US Patent and Trademark Office
Knox
571-272-7501
Date 12-12-2007


VIVIAN CHIN
SUPERVISOR PATENT EXAMINER
TECHNOLOGY CENTER 2600